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Substitute Specification

ABSTRACT

[0036] A method for manufacturing hollow shafts having end portions of greater wall thickness and at least one intermediate portion of reduced wall thickness, from a tube having constant wall thickness. The method includes providing a mandrel having diameters stepped over its length, with a first longitudinal section having a smallest diameter and at least one further longitudinal section having a further larger diameter. Reducing the external diameter of a first portion of the tube over the first longitudinal section of the mandrel to produce the first end portion. Reducing the external diameter of a middle portion of the tube over the at least one further longitudinal section of the mandrel to produce the at least one intermediate portion. Reducing the external diameter of a further portion of the tube over the first longitudinal section of the mandrel to produce the second end portion.